

# **Ewing Mountain Vegetation Project Environmental Assessment**

## **Recreation Report**

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## Introduction

This report discloses the direct, indirect, and cumulative effects of the Ewing Mountain Vegetation Project on recreational opportunities and facilities within the project boundaries. The primary focus of this analysis is the impact to current and future opportunities with emphasis on trails and dispersed recreation.

The proposed project is approximately 17,200 acres in size and is located within Grayson, Wythe, and Carroll Counties, about 20 miles south of Wytheville, Virginia.

Treatments will include vegetation thinning, timber harvest, and wildlife habitat enhancement. Other actions include forest system roads maintenance, herbicide treatment of invasive and undesirable species, and a wildlife-focused ecosystem type conversion. The expectation is an improvement in ecological function and an increased diversity in the structure and composition of the vegetation. Benefits would include increased soil moisture, reduced soil movement, and improved water quality. The treatments are also expected to increase the resilience of the ecosystem to respond to expected changes imposed by future climate trends.

## Methodology

ArcMap geographic information system (GIS) was used to analyze the proposed activities in regards to recreation use and facilities and the recreation opportunity spectrum settings within the project area. The potential impacts to recreation from this project were determined based on personal observations and knowledge of recreation opportunities in the project area. Review of environmental analyses for similar projects were performed as well. The recreation analysis considered the area within the project area boundary unless otherwise noted.

## Incomplete and Unavailable Information

The proposed actions do not offer a schedule or other means to know exactly when treatments are likely to occur or the length of the operations. As a result, effects are addressed in general rather than specific terms (that is, no time table is developed).

## Spatial and Temporal Context for Effects Analysis

The spatial boundary for analyzing the direct and indirect effects to recreation is the project area since those effects would not carry over outside the project area. The spatial boundary for analyzing cumulative effects to recreation is forest-wide. Temporary displacement and relocation of recreational activities are likely to occur within the Forest boundaries and information on relocation of activities to other land ownership is not readily available.

The temporal boundary for analyzing the direct and indirect effects is the duration of project implementation, because effects to recreation would be short term. Travel routes and recreation sites are affected mostly by temporary closures or restrictions due to operations in and around their vicinity. Associated sights and sounds of such activity can affect the recreational experience of people in areas adjacent to those being treated. The time required to treat an area by mechanical means that causes the types of effects described varies. Past practices on

the George Washington and Jefferson NFs suggest that such effects can range from one to six months. No long-term effects are anticipated; that is, effects as described above would not last more than six months in a single treatment area at a time.

## Affected Environment

Recreation management on the Mt. Rogers NRA follows the guidance and direction described in the 2004 *Revised Land and Resource Management Plan Jefferson National Forest* (hereinafter referred to as the Forest Plan) (Forest Service, 2004). Recreation resources within the Ewing Mountain project area include a number of trails (Table 1), Raven Cliff Furnace, Raven Cliff Campground, Raven Cliff Picnic Area, Collins Cove Horse Camp, and Sunrise Cabin. Divide Trail (FST 309) forms the project area's southwestern edge. Hussy Mountain Horse Camp lies approximately 1½ miles west of the project area along Forest Road 14, which represents a primary access route. Other primary access routes into the project area include State Route 756 and State Route 602.

Though horseback riding occupies the lion's share of recreation activity in the area, other opportunities include hiking, motorcycle riding, mountain biking, driving forest roads, dispersed camping, hunting, and fishing. There are no eligible Wild and Scenic Rivers and no Wilderness Areas within the project area, though Little Dry Run Wilderness lies approximately 5 miles west of the project area's western edge. The 4,722-acre Horse Heaven Inventoried Roadless Area abuts the project area to the west, with Forest Service Road 14 providing the boundary.

Formerly managed by the now defunct Wythe Ranger District, the Ewing Mountain project area has been managed for multiple uses since inception as a National Forest. Evidence of past timber management activities is apparent in existing skid trails, Forest roads, and in the existing vegetation types and stand ages. Before National Forest designation, the area saw extensive iron mining activity and evidence persists of the rail network that serviced that activity. Raven Cliff Furnace is also a remnant of that age. System trails in the project area often overlay former Forest roads, skid trails, and rail beds. Many other road and rail corridors are maintained by users as non-System trails. Drawn by the National Forest's extensive multiple use trail network, private land immediately surrounding the project area has become popular with horse owners.

Much of the Ewing Mountain project area occupies Management Prescription 7.E.2 (Dispersed Recreation Area – Suitable for Timber Harvest). The 7.G (Pastoral Landscapes) Management Prescription, also important to the recreation resource, comprises the northwestern corner of the project area and is referred to locally as the Pellbridge Tract. The area is popular with horseback riders, who access it via the Moore Trail (FST 4615) and maintained user-created trails. Hunting for deer, turkey, and ruffed grouse is another noted recreation use in the project area's 7.G compartments. Management Prescription 8.E.1 (Ruffed Grouse Habitat), which comprises the project area's northeastern corner, is also popular with hunters.

Most of the recreation setting within the Ewing Mountain project area is described in the Recreation Opportunity Spectrum (ROS) as Roaded Natural. The Pellbridge Tract is described as Rural. Though outside the project area boundary, Horse Heaven Inventoried Roadless Area (IRA) is defined as Semi-Primitive 2 along Forest Road 14 and Semi-Primitive, Non-Motorized in its interior (Jefferson National Forest Land and Resource Management Plan, USDA Forest Service, 2004, p. 2-42). No harvest activities are proposed within the Horse Heaven IRA.

## Dispersed Recreation Resources

Table 1. Trails within the project area

Trail Name	Use Level <sup>1</sup>	Length <sup>2</sup> (miles)	Description
Virginia Highlands Horse Trail (337)	High	11.5	Major east-west pack and saddle trail. Forms loops with several authorized and user-created trails
Iron Mountain Trail (301)	Moderate	5.0	Major east-west multiple use trail. Less popular on its eastern end.
Yellow Branch Trail (310)	Moderate	3.1	Locally popular for loop-forming opportunities with FST 301 and user-created trails
Bournes Branch Trail (317)	Low	2.2	Usually accessed from the east along FST 310. Western terminus difficult to access
Raven Cliff Trail (4601)	High	1.2	Connects Raven Cliff Campground to Collins Cove Horse Camp along a gentle rail grade
Ewing Mountain Trail (4614)	High	2.0	Accesses FST 337 from Collins Cove Horse Camp. Long, switch-backing, uphill grade to Ewing Mountain
Moore Trail (4615)	High	3.1	Important connector from the town of Shiloh to the Collins Cove community. Well-maintained by local users
Mike's Gap Trail (4504)	Moderate	2.8	Important connector for horse property owners along Rte. 602 and FSR 690 (Snowbird Lane)
Divide Trail (309)	Low	0.7	Connector for loop opportunities between FST 337 and FST 301
Raven Cliff Furnace Trail (4616)	High	0.4	<b>Hiking Only</b> - Access to furnace from Raven Cliff Campground and Picnic Area. Steel-trussed bridge spans Cripple Creek

## Developed Recreation Resources

### Rental Cabin

Sunrise Cabin is available for rent from early April until the end of November. Set along a southwest-facing ridge at an elevation of 2500 feet, the two-story house commands long range views of the Blue Ridge Highlands. Because of this and the Cabin's proximity to major outdoor recreation destinations, its reservations are at capacity most years.

### Family Campground and Picnic Area

Raven Cliff Campground – 20 total sites without wastewater or electricity – fills occasionally on holiday weekends during the summer and early fall. Raven Cliff Recreation Area includes the campground, its associated

<sup>1</sup> Use Level is people per day (ppd) during peak use (i.e. school vacation weeks, holiday weekends). Range of Use Levels is: Low = 0-6 ppd; Moderate = 7-25 ppd; High = 26-50 ppd; Very High = 51+ ppd.

<sup>2</sup> Length within the project area

picnic area, and the historic furnace a short walk away. The Area is popular locally with campers and anglers, who enjoy world class trout fishing along the banks of Cripple Creek.

## Horse Camps

Though only Collins Cove Horse Camp – 10 total sites with vault toilets and no electricity – resides within the project area, Hussy Mountain Horse Camp – 10 total sites with vault toilets and no electricity – lies only 1 ½ miles west of the project area's western edge along FSR 14. Collins Cove Horse Camp is full almost every weekend during the summer and early fall. Its location within a meadowed cove along the course of Cripple Creek contributes to its popularity. Many campers return annually. The Camp easily accesses a network of authorized and user-created trails within the project area. Hussy Mountain Horse Camp, though less popular than Collins Cove, serves as a basecamp for riders to enjoy loop opportunities on trails both in and outside the project area.

## Environmental Consequences

### Direct and Indirect Effects

#### Recreation Resources

The analysis area for direct and indirect effects on recreation is defined as the Ewing Mountain project area and National Forest recreation resources adjacent to the project area boundary, such as Hussy Mountain Horse Camp. The area is chosen because it includes all National Forest dispersed and developed recreation activities taking place within or adjacent to the Ewing Mountain project area. The time frame for analysis is two to ten years based on potential effects including foreground scenery modifications shown to be apparent for up to ten years, after which the forest appears more natural.

Direct effects, such as foreground visual disturbance, related to harvest activities are expected to be present for approximately two to three years, depending on management prescription. Foreground visual effects result from tree removal, logging slash, and soil disturbance in nearby or crossing skid trails. The duration of this analysis is selected because once a management action ceases, most effects to recreation also cease; except for scenery modifications which may persist for ten years. The Forest Plan Forest-wide directive 158 (FW-158) addresses mitigations for timber management activities along system trails (Forest Service, 2004, p. 2-41). This guidance is adhered to in the proposed action for the Ewing Mountain Project. Though foreground scenery effects will be included in this portion of the analysis, middle and background effects are analyzed in a different section. The project area's history of logging and mining activity – and road construction associated with such activity – provides ample opportunity for the creation and maintenance of non-system or user-created trails. These trails, which often form loop opportunities with Forest Service Trails, will not be analyzed here.

Harvesting activities within the Ewing Mountain project area will directly and indirectly affect the recreation experience in the short term. Those effects are reported below. Direct effects include concurrent use of Forest Service Trails and Roads by logging traffic, perpendicular crossing of Forest Service Trails by skid trails, scenery modifications, and noise from project activities. Much of the indirect impact to the recreation resource within the project area can be summarized with increased logging traffic along State Highways and Routes which provide access to the area's recreation opportunities. Those indirect effects will be most keenly felt along State Route 602, which is paved but narrow. The Forest Road 690 system, popular with both horseback riders and hunters, will also

witness heavy logging traffic. Though not directly addressed as part of this analysis, hunting as a recreational activity generally benefits from timber harvesting.

**Table 2. Direct and Indirect Effects of Harvest Activities on Dispersed Recreation**

Trail Name	Unit	Management Prescription	Description of Effects
Virginia Highlands Horse Trail (337)	C4970 S39	Thinning	Mature white and yellow pine stand. Thinning will affect short term foreground scenery. Logging traffic where FST 337 crosses Rte. 602
	C4970 S3	Thinning	Mature white pine, oak stand. Trail transects unit, resulting in short term foreground scenery effects.
	C4970 S22	Thinning	White pine. Short term foreground scenery effects. VHHT runs concurrently with FSR 4050, proposed as a haul road with a landing at the intersection of FST 337 and FSR 4050. Logging traffic will be concurrent with FST 337 for approximately 180 feet
	C4984 S11	Thinning	Mature red oaks. Unit does not overlap the trail, but logging traffic must use FSR 4050 to haul. Hauling activity will be concurrent with FST 337 for 0.6 miles
	C4984 S3	Thinning	Mature, poor quality red oaks with table mountain pine. FST 337 transects unit. Short term foreground scenery effects. Unit uses FSR 4050 for a haul road. Hauling activity will be concurrent with FST 337 for 0.6 miles. FST Trail 4504 (Mike's Gap Trail) runs concurrently with FSR 4050 for a 0.9 mile section east from the town of Shiloh, when it intersects and runs concurrently with FST 337 (VHHT) for another 0.6 miles.
	C4979 S22	Clear cut with reserves	Poor quality red oaks and yellow pine. FST 337 transects unit. Short term foreground scenery effects greater than thinning prescription. A proposed temporary road crosses FST 337 which would haul from units C4979 S22 and C4977 S1. Harvest from these units would be hauled on FSR 49790, which runs concurrently with FST 337 for 0.8 miles, thus hauling activity will be concurrent with FST 337 for 0.8 miles
Iron Mountain Trail (301)	N/A	N/A	No units directly impact FST 301. Indirect logging traffic effects if users are exiting FST 301 at its eastern terminus via FSR 797
Yellow Branch Trail (310)	C4974 S29	Thinning	FST 310 transects unit. Short term foreground scenery effects. Proposed skid trail crosses FST 310 three times within the unit. Hauling activity from units C4974 S29, C4974 S5, and C4974 S22 along FSR 797 will cross FST 310. Logging traffic and horse trailer traffic will coincide at Yellow Branch/Bournes Branch Trailhead along Rte. 602
Bournes Branch Trail (317)	N/A	N/A	No units directly impact FST 317, but loop opportunities with FST 310 and FST 301 will experience logging traffic on FSR 797

Trail Name	Unit	Management Prescription	Description of Effects
Raven Cliff Trail (4601)	N/A	N/A	No units directly impact FST 4601. Trail users crossing State Route 643 to access Collins Cove Horse Camp or FST 4614 will encounter logging traffic hauling from units C4984 S16, C4983 S1, C4984 S17, C4983 S2, C4984 S15, and C4983 S5
Ewing Mountain Trail (4614)	C4971 S17	Thinning	Medium to poor quality red oaks, black gum, and sourwood. Short term foreground scenery effects. Proposed skid trails crisscross FST 4614. Trail users intending to cross Rte. 643 will encounter logging traffic
Moore Trail (4615)	C4970 S2	Thinning	Yellow poplar, white, and northern red oaks. Short term foreground scenery effects where unit is adjacent to FST 4615
	C4970 S11	Thinning	Mature white pine. Trail bisects part of the unit. Short term foreground scenery effects. Intersection of FSR 4051, identified as a haul road, and FST 4615 is an informal trailhead. Loop opportunities with FST 337 and FST 4504 will be impacted by logging traffic. Harvest from units C4970 S7, C4970 S10, and C4970 S12 will also use FSR 4051 as a haul road
	C4970 S5	Thinning	Yellow poplar, white, and northern red oaks. FST 4615 bisects unit. Short term foreground visual effects expected. Proposed skid trail crisscrosses FST 4615. Harvest from units C4970 S5 and C4970 S6 will use FSR 4051 as a haul road
	C4984 S16	Thinning	Mature white and chestnut oaks. Boundary between units C4984 S16 and C4983 S2 is FST 4615. Short term foreground visual effects. Harvest from unit C4984 S16 and C4984 S15 uses proposed skid trail that crosses FST 4615
	C4983 S2	Thinning	Mature white oak, white and yellow pine, and yellow poplar. Short term foreground scenery effects expected.
	C4983 S1	Shelterwood with reserves (SWR)	Primarily mature white pine. Boundary between units C4983 S1 and C4984 S17 is FST 4615. A proposed landing with four proposed intersecting skid trails lies adjacent to the trail, but a proposed temporary haul road to the north keeps logging traffic off FST 4615. That proposed haul road may be visible at certain intervals from FST 4615
	C4984 S17	Thinning	Mature, high-quality chestnut oak. Short term foreground scenery effects. Logging traffic from unit C4983 S5 will be visible from FST 4615
Mike's Gap Trail (4504)	C4972 S4	Thinning	Mature white pine, oaks. The unit resides at the eastern terminus of FST 4504, where it intersects FSR 690 and will affect short term foreground scenery. Units located along the western portion of FST 4504, where it runs concurrently with FSR 4050 and FST 337, are analyzed above

Trail Name	Unit	Management Prescription	Description of Effects
Divide Trail (309)	N/A	N/A	No direct effects. Forms the project area's southwestern boundary
Raven Cliff Furnace Trail (4616)	N/A	N/A	No direct effects.
Pellbridge Tract	C4970 S87	Type Conversion	Though not a system trail or an established recreation site, the rolling pastureland and meadows of this Tract provide ample opportunities for recreation such as horseback riding and hunting. Unit C4970 S87 proposes a clear cut of a degraded, planted white pine stand. The removal of this stand, along with addressing non-native invasive species, will return this unit to old field habitat, consistent with the Tract's 7.G Management Prescription. Scenery will improve beyond the short term.

**Table 3. Direct and Indirect Effects of Harvest Activities on Developed Recreation**

Resource Name	Unit	Management Prescription	Description of Effects
Sunrise Cabin	C4977 S1 C4979 S22	Thinning	Harvest from units C4977 S1 and C4979 S22 will use FSR 49790 as a haul road. FSR 49790 is the access road for the rental cabin.
Raven Cliff Recreation Area	N/A	N/A	No direct effects. Some indirect effect from increased truck traffic on Rte. 602, which accesses Raven Cliff Recreation Area
Collins Cove Horse Camp	C4984 S16 C4983 S1 C4984 S17 C4983 S2 C4984 S15 C4983 S5	Thinning, and C4983 S1 is SWR	These units use a proposed temporary road running parallel to FST 4615 to haul timber to State Route 643, which is the access road for Collins Cove Horse Camp. Horse trailers entering and exiting the Camp will routinely encounter logging traffic on Rte. 643
Hussy Mountain Horse Camp	N/A	N/A	No direct and negligible indirect effects. Lies outside the project area's boundary

### Noise from Project Activities

Generally, operational noise is not audible beyond one to two miles in forested situations (Timerson 1999, Neitzel and Yost 2003). This estimate is based on data and analysis gathered by a forestry noise study that measured decibel levels of various harvesting machinery and professional experience specific to field observations in hardwood forests (Neitzel and Yost 2003, p. 15). The distance of one to two miles is generally based on assumptions of average decibels produced by specific machinery. Sound effects are muted where vegetation, wind, and topography are variables (Timerson 1999, p. 5). Noise from logging, landing, and hauling must be viewed in the context of other noise contributing factors adjacent to the project area, such as State Highway 94. Harvest noise tends to be low-pitched, intermittent, and becomes reduced as the source is further from the listener. Noise effects cease when logging, landing, and hauling operations cease.



Project activity noise will be heard along State Route 602 from Shiloh to State Highway 94 at Shepard's Corner. All Forest Service Trails and Roads identified above as seeing effects from harvest activities will also experience noise from logging, landing, and hauling operations, especially in those units which overlay or are adjacent to recreation resources. Hauling noise will be audible in Collins Cove Horse Camp and at Sunrise Cabin. Sunrise Cabin will also be affected by logging and landing operation noise in units C4977 S1 and C4979 S22. The Pellbridge Tract, which forms a topographical bowl, will experience logging, landing, and hauling noise from unit C4970 S87.

## **Public Safety**

Forest users would be alerted when and where logging operations occur concurrently with Forest Service Trails, such as the section of FSR 4050/FST 337/FST 4504 east of Shiloh. Public safety on all Forest Roads and State Routes where log transport is occurring would be addressed with logging contract clauses, contract administration, and road signage. Along Forest Roads where public motor vehicle use is authorized, routes would be posted with traffic control signage and speed limits to ensure public and logging operator safety. Trails and Forest Service Roads that lay adjacent to or within harvest units may be subject to temporary closure when logging operations are underway. These closures will be well-communicated to the recreating public through the George Washington and Jefferson National Forest's website and Twitter account. Furthermore, recreation staff will contact leaders of local horse user groups who will in turn spread the message. Signage warning of logging activity or trail closures will be placed in advance of operations.

## **Cumulative Effects**

The analysis area for cumulative effects is the same as the analysis area for direct and indirect effects. The time frame for analysis of cumulative effects spans from ten years ago to ten years in the future. This duration was chosen because it represents a reasonable length of time for measuring past effects and for projecting upcoming forest management activities.

During the past ten years, no major change in recreation planning or activity occurred within the project area and no harvest related activities took place. Mining activity in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, and logging activity as recently as 30 years ago, created a network of roads and trails throughout the project area. Many were converted to Forest Service Trails and many more are being maintained as user-created horse trails. The Ewing Mountain Project will create skid trails and temporary haul roads, some of which will also be maintained as user-created trails.

No deliberate, major Forest Service recreation activities are planned within the project area for the foreseeable future. Recreation visitors to the project area may experience inconvenience during temporary trail closures or shared road use with logging traffic, but these effects are not compounded cumulatively with activities on surrounding private land or historical Forest Service activities within the analyzed area..

## **Summary**

Direct effects to the recreation resource are most acutely felt along the Virginia Highlands Horse Trail (FST 337) and the Moore Trail (FST 4615), but these effects are temporary, and most will cease once harvesting activities cease. The same can be said for less affected trails and recreation sites within the project area. Logging traffic on concurrent trails/roads and skid trails will occur only during project implementation but will be monitored by

recreation and timber staff for public and logging operator safety. Concurrent trail use with logging traffic along FSR 4050/FST 337/FST 4504 and along FSR 49790/FST 337 represents the greatest impact to trail users. However, these effects end when harvesting activities cease. Short term foreground effects on scenery will subside as the forest regenerates. Though the majority of timber management activity within the project area consists of thinning, the effects to foreground scenery of unit C4979 S22 (clear cut with reserves) along the eastern end of FST 337 will be more durable. The indirect effects of logging traffic will be apparent to visitors at the Yellow Branch/Bournes Branch Trailhead, Collins Cove Horse Camp, Sunrise Cabin, and recreation visitors traveling along State Routes 602 and 643. Noise from harvest activities will persist as long as the activity persists.

## References Cited

- Forest Service. (2004). *Revised Land and Resource Management Plan Jefferson National Forest*. Roanoke, VA: George Washington and Jefferson National Forests.
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